

REMARKS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-16 were pending prior to the Office Action. Claims 14-16 have been withdrawn from consideration. Of the considered claims, claims 1, 2, 6, and 10 independent.

AFFIRMATION OF ELECTION OF CLAIMS

Applicant hereby affirms the election of claims 1-13, drawn to the calculation of the amount of vibration and the amount of correction using a vibration isolator that prevents image blur using electrical means to compensate for vibration. See *Office Action*, pages 2-3, items 1-3.

OBJECTION TO THE TITLE

The title of the invention is objected to for allegedly being non-descriptive. See *Office Action*, page 3, item 4. The title of the application has been amended to address this issue. Applicant respectfully requests that the objection to the title be withdrawn.

§ 102 REJECTION - IMAFUJI '177

Claims 1, 6-7 and 9 stand rejected under 35 USC 102(b) as allegedly being anticipated by Imafuji et al. (USP 5,617,177, hereinafter "Imafuji '177"). Applicant respectfully traverses.

For a Section 102 rejection to be proper, the cited reference must teach or suggest each and every claimed element. See *M.P.E.P.* 2131; *M.P.E.P.* 706.02. Thus, if the cited reference fails to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, Imafuji '177 fails to teach or suggest each and every claimed element of the rejected claims. For example, regarding independent claim 1, it is noted that claim 1 recites, in part, "an integrating device that integrates the speed determined by the vibration speed determining device." Contrary the Examiner's assertion, Imafuji '177 cannot be relied upon to teach or suggest at least this feature.

More specifically, Imafuji '177 is directed toward detecting an unintentional movement of hands in taking a picture with a camera to prevent a blurred image. See Imafuji '177, column 1, lines 10-15. According to Imafuji '177, the angular velocity detected from the shake detection sensor is

differentiated twice by the differentiator 6. See *Imafuji '177*, column 1, lines 48-51; column 3, lines 28-30; column 3, lines 65-67; etc. However, *Imafuji '177* is entirely silent regarding integrating the angular velocity detected by the detection sensor. Thus, *Imafuji '177* cannot teach or suggest integrating the speed determined by the vibration speed determining device as recited.

The Examiner apparently equates twice differentiating angular velocity to be equal to integrating the angular velocity. Clearly, this cannot be. The twice integration of angular velocity represents a differential value of angular acceleration. See *Imafuji '177*, column 3, line 65 - column 4, line 1. However, the result that is obtained by integrating the velocity represents a position of the camera. Clearly, position of the camera and the differential value of the angular acceleration are completely different.

Therefore, it is clear that *Imafuji '177* cannot be relied upon to show integrating of the speed determined by the vibration speed determining device.

Further, claim 1 recites, in part, "a correcting device that corrects the integrated value ... when the differentiated

value calculated by the differentiating device is substantially zero." As clearly shown above, Imafuji '177 does not disclose or suggest integrating the speed at all. Therefore, it logically follows that Imafuji '177 cannot disclose or suggest correcting the integrated value whatsoever.

Second, as recited, the correcting of the integrated value occurs when the differentiated value of the speed is substantially zero. This is to be contrasted with Imafuji '177 where the velocity of the correcting lens 3 is set to be zero when the twice differentiated value of the angular velocity is zero. See Imafuji '177, column 4, lines 1-5. Clearly, a differentiated value of zero and twice differentiated value of zero are not the same and thus, Imafuji '177 cannot be relied upon to teach or suggest a correcting device as claimed.

For at least the above stated reasons, independent claim 1 is distinguishable over Imafuji '177.

Regarding independent claim 6, it is noted that claim 6 recites, in part "a controlling device that keeps the vibration isolating device at an origin until a position of the vibration isolating device for preventing the image blur is the origin after the switching device turns on the vibration isolation" and

also recites "moves the vibration isolating device according to the vibration after the position of the vibration isolating device for preventing the image blur is the origin." In other words, after the vibration isolation mode is switched on, the actual correction does not take place until the correction position is determined to be at the origin. Thus, the trigger which starts the vibration isolation process is based on the position of the isolating device.

This is to be contrasted with Imafuji '177 where the driving of the correcting lens 3 from its initial position is triggered when the differential value of the angular acceleration becomes zero. See Imafuji '177, lines 33-38. In other words, the trigger as disclosed in Imafuji '177, is based on the velocity of the camera movement and not position of the vibration isolating device as claimed.

Clearly, claim 6 is distinguishable over Imafuji '177. Claims 7 and 9 depend from independent claim 6. Therefore, for at least the reasons stated with respect to independent claim 6, these dependent claims are also distinguishable over Imafuji '177 as well as on their own merits.

Applicant respectfully requests that the rejection of claims 1, 6-7 and 9 based on Imafuji '177 be withdrawn.

§ 102 REJECTION - IMAFUJI '875

Claims 2-3 and 5 stand rejected under 35 USC 102(b) as allegedly being anticipated by Imafuji et al. (USP 5,585,875 hereinafter "Imafuji '875"). Applicant respectfully traverses.

Independent claim 2 recites, in part "a controlling device that keeps the vibration isolating device at a position until a predetermined time passes after the switching device turns on the vibration isolation." In other words, the vibration isolation starts to function after a predetermined period of time has passed since activation of the vibration isolation mode.

Contrary to the Examiner's assertion, Imafuji '875 cannot be relied upon to teach or suggest at least this feature. More specifically, the Examiner relied upon Imafuji '875, column 14 lines 5-10; lines 40-45; and Figure 15A. *See Office Action, page 5, item 11.* The Examiner asserts that the isolating device is held at the initial position until time *td* passes. This is an erroneous interpretation.

Closer reading of Imafuji '875 indicates that time t_d is merely a delay between the signal output by the angular velocity sensor 21 and the receipt of the signal by the CPU 20. See *Imafuji '875, column 14, lines 3-5*. Imafuji '875 specifically indicates that the angular velocity at time t is delayed by the time t_d due to the delay caused by intervening circuit elements like the amplifier 22 and the noise cutoff filter 23. See *Imafuji '875, column 14, lines 23-25; Fig. 13*.

The time t_d is in no way related to the activation of the vibration isolating function. Indeed, Imafuji '875 specifically recognizes that the phase delay, caused by the intervening circuits between the velocity sensor and the CPU, is a source of error. See *Imafuji '875, column 16, lines 52-58*. To minimize the amount of error, Imafuji discloses that the exposure of the camera is performed when the angular velocity signal reaching the CPU is zero. See *Imafuji '875, column 16, lines 58-62*.

It is clear that Imafuji '875 is silent regarding delaying any amount of predetermined time between the activation of the vibration correction and the actual functioning of the vibration correction. Therefore, Imafuji '875 cannot be relied upon to teach or suggest the controlling device that keeps the vibration

isolating device at a position until a predetermined time passes after the switching device has turned on as recited in independent claim 2.

Therefore, claim 2 is distinguishable over Imafuji '875. Claims 3 and 5 depend from independent claim 2. Thus, for at least the reasons stated with respect to independent claim 2, claims 3 and 5 are also distinguishable over Imafuji '875.

Applicant respectfully requests that the rejection of claims 2-3 and 5 based on Imafuji '875 be withdrawn.

§ 103 REJECTION - MIYAMOTO, IMAFUJI '177

In the Office Action, claims 10-13 are stated to be rejected under 35 USC 102(b) as allegedly being anticipated by Miyamoto et al. (USP 6,332,060). See Office Action page 6, item 14. However, it is noted that the switching device is purportedly taught in column 4, line 65 - column 5, line 5; and Figure 5, step S22. See Office Action, page 6, item 15. It is noted that the particular reference portion best matches Imafuji '177. Therefore, Applicant will treat this rejection as a Section 103(a) rejection based on a combination of Miyamoto and Imafuji '177. As such, Applicant respectfully traverses.

For a Section 103 rejection to be proper, a *prima facie* case of obviousness must be established. See *M.P.E.P.* 2142. One requirement to establish *prima facie* case of obviousness is that the prior art references, when combined, must teach or suggest all claim limitations. See *M.P.E.P.* 2142; *M.P.E.P.* 706.02(j). Thus, if the cited references fail to teach or suggest one or more elements, then the rejection is improper and must be withdrawn.

In this instance, the combination of Miyamoto and Imafuji '177 cannot be relied upon to teach or suggest all claimed elements of claims 10-13. For example, independent claim 10 recites, in part "a controlling device that starts moving the vibration isolating device with a driving amount that is smaller than that for preventing the image blur when the switching device turns on the vibration isolation and drives the vibration isolating device while gradually increasing the driving amount to that for preventing the image blur." In other words, the driving amount is gradually increased until the amount is sufficient to prevent the image blur from occurring.

In the Office Action, the Examiner asserts that Miyamoto, column 26, lines 24-27 teaches this feature. See *Office Action*,

page 6, item 15. However, a closer examination of Miyamoto indicates otherwise. More specifically, Miyamoto clearly distinguishes between the velocity VR of the vibration compensation lens 113 to the driving duty applied to the motor 104 connected the compensation lens 113. See *Miyamoto, Figures 11, 12 and 13; column 21, line 52 - column 22, line 45*. When power (or driving duty) is applied to the motor, this causes the compensation lens 113 to move. Clearly, "the driving amount" as recited in claim 10 is more analogous to the driving duty as disclosed in Miyamoto. The vibration compensation lens velocity VR has no relationship to the driving amount as claimed. Thus, to the extent that the relied upon portion of Miyamoto merely discusses the lens velocity VR, it cannot teach or suggest controlling a driving amount whatsoever. Indeed, the relied upon portion merely recognizes that inertia of a physical object must be overcome when it is to be moved.

Because the lens velocity as taught in Miyamoto is in no way related to the driving amount as recited in claim 10, Miyamoto cannot be relied upon to teach or suggest at least this feature. Also, Imafuji '177 cannot be, and indeed has not been, relied upon to correct for at least this deficiency of Miyamoto.

Therefore, independent claim 10 is distinguishable over the combination of Miyamoto and Imafuji '177.

Claims 11-13 depend from independent claim 10. Therefore, for at least the reasons stated with respect to independent claim 10 as well as on their own merits, these dependent claims are also distinguishable over the combination of Miyamoto and Imafuji '177.

Applicant respectfully requests that the rejection of claims 10-13 based on Miyamoto and Imafuji '177 be withdrawn.

§ 103 REJECTION -IMAFUJI '875, MIYAMOTO

Claim 4 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Imafuji '875 in view of Miyamoto. Applicant respectfully traverses.

It is noted that claim 4 depends from independent claim 2 and it has been shown above that claim 2 is distinguishable over Imafuji '875. Miyamoto has not been, and indeed cannot be, relied upon to correct for at least the above noted deficiencies of Imafuji '875 with respect to claim 2. Therefore, independent claim 2 is distinguishable over the combination of Imafuji '875 and Miyamoto.

For at least due to the dependency thereon, claim 4 is also distinguishable over the combination of Imafujii '875 and Miyamoto. Therefore, Applicant respectfully requests that the rejection of claim 4 based on Imafujii '875 and Miyamoto be withdrawn.

§ 103 REJECTION -IMAFUJII '177, MIYAMOTO

Claim 8 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Imafujii '177 in view of Miyamoto. Applicant respectfully traverses.

It is noted that claim 8 depends from independent claim 6 and it has been shown above that claim 6 is distinguishable over Imafujii '177. Miyamoto has not been, and indeed cannot be, relied upon to correct for at least the above noted deficiencies of Imafujii '177 with respect to claim 6. Therefore, independent claim 6 is distinguishable over the combination of Imafujii '177 and Miyamoto.

For at least due to the dependency thereon, claim 8 is also distinguishable over the combination of Imafujii '177 and Miyamoto. Therefore, Applicant respectfully requests that the

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rejection of claim 8 based on Imafuji '177 and Miyamoto be withdrawn.

CONCLUSION

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Enclosures